



PTO/SB/21 (09-04)

**TRANSMITTAL  
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Total Number of Pages in This Submission

|                        |                      |
|------------------------|----------------------|
| Application Number     | 10/705,391           |
| Filing Date            | November 10, 2003    |
| First Named Inventor   | HUGHES, JOY VANNELIA |
| Art Unit               | 3732                 |
| Examiner Name          | MANAHAN, TODD        |
| Attorney Docket Number | 018563-005910US      |

**ENCLOSURES (Check all that apply)**

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| <input type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input checked="" type="checkbox"/> Supplemental Information Disclosure Statement<br><br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Reply to Missing Parts/ Incomplete Application<br><input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation<br>Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s) _____<br><input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):<br>Return Postcard<br>PTO/SB/08A & PTO/SB/08B<br>149 Reference Copies |
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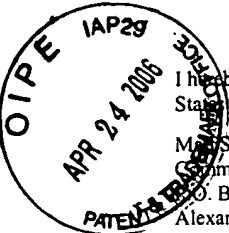
**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

|              |                                    |          |        |
|--------------|------------------------------------|----------|--------|
| Firm Name    | Townsend and Townsend and Crew LLP |          |        |
| Signature    |                                    |          |        |
| Printed name | James M. Heslin                    |          |        |
| Date         | April 19, 2006                     | Reg. No. | 29,541 |

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PATENT  
Attorney Docket No.: 018563-005910US  
Client Reference No.: AT00030.2

On 4/20/06

TOWNSEND and TOWNSEND and CREW LLP

By: [Signature]  
Tiffany Wu

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

JOY VANNELIA HUGHES et al.

Application No.: 10/705,391

Filed: November 10, 2003

For: SYSTEM AND METHOD FOR  
SEPARATING THREE-DIMENSIONAL  
MODELS

Customer No.: 46718

Confirmation No.: 4356

Examiner: MANAHAN, TODD

Art Unit: 3732

SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER  
37 CFR §1.97 and §1.98

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

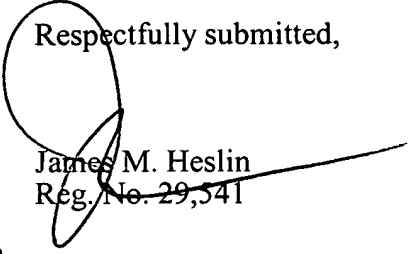
As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

  
James M. Heslin  
Reg. No. 29,541

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|   |   |                          |                      |                        |                 |
|---|---|--------------------------|----------------------|------------------------|-----------------|
| <b>Substitute for form 1449A/PTO</b><br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   | <b>Complete if Known</b> |                      |                        |                 |
|   |   | Application Number       | 10/705,391           |                        |                 |
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|   |   | Examiner Name            | MANAHAN, TODD        |                        |                 |
| Sheet   | 1 | of                       | 13                   | Attorney Docket Number | 018563-005910US |

| U.S. PATENT DOCUMENTS |                          |  |                                |  |   |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                       |                          | Number Kind Code <sup>2</sup> (if known) |                                |  |   |
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| FOREIGN PATENT DOCUMENTS |                          |                           |                     |                                   |                                |  |   |                                     |
|--------------------------|--------------------------|---------------------------|---------------------|-----------------------------------|--------------------------------|--|---|-------------------------------------|
| Examiner<br>Initials*    | Cite<br>No. <sup>1</sup> | Foreign Patent Document   |                     |                                   | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear | T <sup>6</sup>                      |
|                          |                          | Country Code <sup>3</sup> | Number <sup>4</sup> | Kind Code <sup>5</sup> (if known) |                                |  |   |                                     |
|                          | 1                        | AU                        | 517102              |                                   | 07-09-1981                     | Hito Suyehiro                                      |   | <input type="checkbox"/>            |
|                          | 2                        | AU                        | 3031677             |                                   | 05-10-1979                     | Hito Suyehiro                                      |   | <input type="checkbox"/>            |
|                          | 3                        | AU                        | 5598894             |                                   | 06-08-1994                     | Ormco Corp   |   | <input type="checkbox"/>            |
|                          | 4                        | CA                        | 1121955             |                                   | 04-20-1982                     | Suyehiro Hito                                      |   | <input type="checkbox"/>            |
|                          | 5                        | DE                        | 2749802             |                                   | 05-11-1978                     | Suyehiro Hito                                      |   | <input type="checkbox"/>            |
|                          | 6                        | DE                        | 69327661            |                                   | 07-20-2000                     | Ormco Corp   |   | <input type="checkbox"/>            |
|                          | 7                        | EP                        | 0091876             |                                   | 10-19-1983                     | Duret  |   | <input type="checkbox"/>            |
|                          | 8                        | EP                        | 0299490             |                                   | 01-18-1989                     | Steinbichler                                       |   | <input type="checkbox"/>            |
|                          | 9                        | EP                        | 0376873             |                                   | 07-04-1990                     | Shafir   |   | <input type="checkbox"/>            |
|                          | 10                       | EP                        | 0490848             |                                   | 06-17-1992                     | Nobelpharma AB.                                    |   | <input type="checkbox"/>            |
|                          | 11                       | EP                        | 0541500             |                                   | 05-12-1993                     | Nobelpharma AB                                     |   | <input type="checkbox"/>            |
|                          | 12                       | EP                        | 0667753             |                                   | 08-23-1995                     | Ormco Corp   |   | <input type="checkbox"/>            |
|                          | 13                       | EP                        | 0774933             |                                   | 05-28-1997                     | Sandvik AB   |   | <input type="checkbox"/>            |
|                          | 14                       | EP                        | 0731673             |                                   | 09-18-1996                     | Nobel Biocare AB                                   |   | <input type="checkbox"/>            |
|                          | 15                       | ES                        | 463897              |                                   | 01-01-1980                     | Hito Suyehiro                                      |   | <input type="checkbox"/>            |
|                          | 16                       | FR                        | 2369828             |                                   | 06-02-1978                     | Hito Suyehiro                                      |   | <input type="checkbox"/>            |
|                          | 17                       | FR                        | 2652256             |                                   | 03-29-1991                     | Jourda   |   | <input type="checkbox"/>            |
|                          | 18                       | GB                        | 1550777             |                                   | 08-22-1979                     | Hito Suyehiro                                      |   | <input type="checkbox"/>            |
|                          | 19                       | JP                        | 04-028359           |                                   | 01-30-1992                     | Mitsubishi<br>Petrochemical Co                     |   | <input checked="" type="checkbox"/> |
|                          | 20                       | JP                        | 53-058191           |                                   | 05-25-1978                     | Yoshii   |   | <input type="checkbox"/>            |
|                          | 21                       | JP                        | 08-508174           |                                   | 09-03-1996                     | Ormco Corp   |   | <input type="checkbox"/>            |
|                          | 22                       | WO                        | 90/08512            |                                   | 08-09-1990                     | Dolphin Imaging System                             |   | <input type="checkbox"/>            |
|                          | 23                       | WO                        | 91/04713            |                                   | 04-18-1991                     | Jourda et al.                                      |   | <input type="checkbox"/>            |

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| Examiner<br>Signature |  | Date<br>Considered |  |
|-----------------------|--|--------------------|--|

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

|   |   |    |    |                          |                      |
|---|---|----|----|--------------------------|----------------------|
| Substitute for form 1449A/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |   |    |    | <b>Complete if Known</b> |                      |
|   |   |    |    | Application Number       | 10/705,391           |
|   |   |    |    | Filing Date              | November 10, 2003    |
|   |   |    |    | First Named Inventor     | HUGHES, JOY VANNELIA |
|   |   |    |    | Art Unit                 | 3732                 |
|   |   |    |    | Examiner Name            | MANAHAN, TODD        |
| Sheet   | 2 | of | 13 | Attorney Docket Number   | 018563-005910US      |

| FOREIGN PATENT DOCUMENTS |                          |                           |                     |                                   |                                |  |   |                          |
|--------------------------|--------------------------|---------------------------|---------------------|-----------------------------------|--------------------------------|--|---|--------------------------|
| Examiner<br>Initials*    | Cite<br>No. <sup>1</sup> | Foreign Patent Document   |                     |                                   | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear | T <sup>6</sup>           |
|                          |                          | Country Code <sup>3</sup> | Number <sup>4</sup> | Kind Code <sup>5</sup> (if known) |                                |  |   |                          |
|                          | 24                       | WO                        | 94/10935            |                                   | 05-26-1994                     | Ormco Corp   |   | <input type="checkbox"/> |
|                          | 25                       | WO                        | 98/32394            |                                   | 07-30-1998                     | Hultgren Bruce Willard                             |   | <input type="checkbox"/> |
|                          | 26                       | WO                        | 98/44865            |                                   | 10-15-1998                     | Nobel Biocare AB                                   |   | <input type="checkbox"/> |

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| Examiner<br>Signature |  | Date<br>Considered |  |
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|  |   |    |    |                          |                      |
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|  |   |    |    | Art Unit                 | 3732                 |
|  |   |    |    | Examiner Name            | MANAHAN, TODD        |
| Sheet  | 3 | of | 13 | Attorney Docket Number   | 018563-005910US      |

| NON PATENT LITERATURE DOCUMENTS |                       |  |                          |
|---------------------------------|-----------------------|--|--------------------------|
| Examiner Initials *             | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  | T <sup>2</sup>           |
|                                 | 27                    | ALEXANDER et al., The DigiGraph Work Station Part 2, Clinical Management, <i>JCO</i> (July 1990), pp. 402-407.   | <input type="checkbox"/> |
|                                 | 28                    | ALTSCHULER et al, Measuring Surfaces Space-Coded by a Laser-Projected Dot Matrix, <i>SPIE Imaging Applications for Automated Industrial Inspection and Assembly</i> , Vol. 182 (1979), p. 187-191.   | <input type="checkbox"/> |
|                                 | 29                    | ALTSCHULER et al., "Analysis of 3-D Data for Comparative 3-D Serial Growth Pattern Studies of Oral-Facial Structures," IADR Abstracts, Program and Abstracts of Papers, 57th General Session, IADR Annual Session, March 29, 1979 - April 1, 1979, New Orleans Marriot, <i>Journal of Dental Research</i> , Vol. 58, January, 1979, Special Issue A, p. 221. | <input type="checkbox"/> |
|                                 | 30                    | ALTSCHULER et al., Laser Electro-Optic System for Rapid Three-Dimensional (3D) Topographic Mapping of Surfaces, <i>Optical Engineering</i> , Vol. 20, No. 6, (1981), pp. 953-961.  | <input type="checkbox"/> |
|                                 | 31                    | ALTSCHULER, 3D Mapping of Maxillo-Facial Prosthesis, AADR Abstract #607, 1980, 2 pages total.  | <input type="checkbox"/> |
|                                 | 32                    | AMERICAN ASSOCIATION FOR DENTAL RESEARCH, Summary of Activities, March 20-23, 1980, Los Angeles, CA, p. 195.   | <input type="checkbox"/> |
|                                 | 33                    | ANDERSSON et al., Clinical Results with Titanium Crowns Fabricated with Machine Duplication and Spark Erosion, <i>Acta Odontological Scandinavia</i> , Vol. 47 (1989), pp. 279-286.  | <input type="checkbox"/> |
|                                 | 34                    | ANDREWS, <i>The Six Keys to Optimal Occlusion Straight Wire</i> , Chapter 3, pp 13-24.   | <input type="checkbox"/> |
|                                 | 35                    | BAUMRIND et al., A Stereophotogrammetric System for the Detection of Prosthesis Loosening in Total Hip Arthroplasty, NATO Symposium on Applications of Human Biostereometrics, July 9-13, 1978, <i>SPIE</i> , Vol. 166, pp. 112-123.   | <input type="checkbox"/> |
|                                 | 36                    | BAUMRIND et al., Mapping the Skull in 3-D, Reprinted from The Journal, <i>California Dental Association</i> , Vol. 48, No. 2 (1972 Fall Issue) 11 pages total.   | <input type="checkbox"/> |
|                                 | 37                    | BAUMRIND, "A System for Craniofacial Mapping Through the Integration of Data from Stereo X-Ray Films and Stereo Photographs," An invited paper submitted to the 1975 American Society of Photogram. Symposium on Close-Range Photogram. Systems, University of Ill., Aug. 26-30, 1975, pp. pp.142-166.   | <input type="checkbox"/> |

|                    |  |                 |  |
|--------------------|--|-----------------|--|
| Examiner Signature |  | Date Considered |  |
|--------------------|--|-----------------|--|

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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

|  |   |    |    |                          |                      |
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| Sheet  | 4 | of | 13 | Attorney Docket Number   | 018563-005910US      |

| NON PATENT LITERATURE DOCUMENTS |                          |  |                          |  |
|---------------------------------|--------------------------|--|--------------------------|--|
| Examiner<br>Initials *          | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  | T <sup>2</sup>           |  |
|                                 | 38                       | BAUMRIND, Integrated Three-Dimensional Craniofacial Mapping: Background, Principles, and Perspectives, <i>Seminars in Orthodontics</i> , Vol. 7, No. 4 (Dec. 2001), pp. 223-232.   | <input type="checkbox"/> |  |
|                                 | 39                       | BEGOLE et al., A Computer System for the Analysis of Dental Casts, <i>The Angle Orthodontist</i> , Vol. 51 No. 3 (July 1981), pp. 253-259.   | <input type="checkbox"/> |  |
|                                 | 40                       | BERNARD et al., "Computerized Diagnosis in Orthodontics for Epidemiological Studies: A Progress Report, Paper presented at International Association for Dental Research 66th General Session, March 9-13, 1988, Montreal, Canada. The abstract is published in <i>J Dental Res Special Issue</i> Vol. 67, p. 169. | <input type="checkbox"/> |  |
|                                 | 41                       | BHATIA et al, A Computer-Aided Design for Orthognathic Surgery, <i>British Journal of Oral and Maxillofacial Surgery</i> , Vol. 22 (1984), pp. 237-253.  | <input type="checkbox"/> |  |
|                                 | 42                       | BIGGERSTAFF et al., Computerized Analysis of Occlusion in the Postcanine Dentition, <i>American Journal of Orthodontics</i> , Vol. 61, No. 3 (Mar. 1972), pp. 245-254.   | <input type="checkbox"/> |  |
|                                 | 43                       | BIGGERSTAFF, Computerized Diagnostic Setups and Simulations, <i>The Angle Orthodontist</i> , Vol. 40, No. 1 (Jan. 1970), pp. 28-36.  | <input type="checkbox"/> |  |
|                                 | 44                       | BIOSTAR OPEATION & TRAINING MANUAL. Great Lakes Orthodontics, Ltd. 199 Fire Tower Drive, Tonawanda, New York. 14150-5890. 20 pages total   | <input type="checkbox"/> |  |
|                                 | 45                       | BOYD et al., Three Dimensional Diagnosis and Orthodontic Treatment of Complex Malocclusions Wlith the Invisalign Appliance, <i>Seminars in Orthodontics</i> , Vol. 7, No. 4 (Dec. 2001), p. 274-293.   | <input type="checkbox"/> |  |
|                                 | 46                       | BRANDESTINI et al., Computer Machined Ceramic Inlays: In Vitro Marginal Adaptation, <i>Journal of Dental Research</i> , Vol. 64/Special Issue/Abstracts, IADR/AADR Abstracts 1985, p. 208  | <input type="checkbox"/> |  |
|                                 | 47                       | BROOK et al., An Image Analysis System for the Determination of Tooth Dimensions from Study Casts: Comparison with Manual Measurements of Mesio-distal Diameter, <i>J Dent Res.</i> , Vol. 65, No. 3, March 1986, pp. 428-431.   | <input type="checkbox"/> |  |
|                                 | 48                       | BURSTONE (interview), Dr. Charles J. Burstone on The Uses of the Computer in Orthodontic Practice (Part 1), <i>Journal of Clinical Orthodontics</i> , (1979 Jul), Vol. 13. No. 7, pp. 442-53.  | <input type="checkbox"/> |  |

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| NON PATENT LITERATURE DOCUMENTS |                       |  |                          |  |
|---------------------------------|-----------------------|--|--------------------------|--|
| Examiner Initials *             | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  | T <sup>2</sup>           |  |
|                                 | 49                    | BURSTONE (interview), Dr. Charles J. Burstone on The Uses of the Computer in Orthodontic Practice (Part 2), <i>Journal of Clinical Orthodontics</i> , (1979 Aug), Vol. 13, No. 8, pp. 539-51.  | <input type="checkbox"/> |  |
|                                 | 50                    | BURSTONE et al., Precision Adjustment of the Transpalatal Lingual Arch: Computer Arch Form Predetermination, <i>Am. Journal of Orthodontics</i> , Vol. 79, No. 2 (Feb. 1981), pp. 115-133.   | <input type="checkbox"/> |  |
|                                 | 51                    | CARDINAL INDUSTRIAL FINISHES, Powder Coatings information posted at <a href="http://www.cardinalpaint.com">http://www.cardinalpaint.com</a> on Aug. 25, 2000, 2 pages total.   | <input type="checkbox"/> |  |
|                                 | 52                    | CARNAGHAN et al., An Alternative to Holograms for the Portrayal of Human Teeth, <i>Fourth International Conference Holographic Systems, Components and Applications</i> , Sep 13-15, 1993, Issue 379, pp. 228-231.   |                          |  |
|                                 | 53                    | CHACONAS et al., The DigiGraph Work Station, Part 1, Basic Concepts, <i>JCO</i> (June 1990), pp. 360-367.  | <input type="checkbox"/> |  |
|                                 | 54                    | CHAFETZ et al., Subsidence of the Femoral Prosthesis, A Stereophotogrammetric Evaluation, <i>Clinical Orthopedics and Related Research</i> , No. 201 (December 1985), pp. 60-67.   | <input type="checkbox"/> |  |
|                                 | 55                    | CRAWFORD, CAD/CAM in the Dental Office: Does It Work? <i>Canadian Dental Journal</i> , Vol. 57, No. 2 (Feb. 1991), pp. 121-123.  | <input type="checkbox"/> |  |
|                                 | 56                    | CRAWFORD, "Computers in Dentistry: Part 1: CAD/CAM: The Computer Moves Chairside," "Part 2: F. Duret — A Man With A Vision," "Part 3: The Computer Gives New Vision- Literally," "Part 4: Bytes 'N Bites" The Computer Moves From The Front Desk To The Operatory, <i>Canadian Dental Journal</i> , Vol. 54(9), (1988), pp. 661-666. | <input type="checkbox"/> |  |
|                                 | 57                    | CROOKS, CAD/CAM Comes to USC, <i>USC Dentistry</i> , (Spring 1990) pp. 14-17.  | <input type="checkbox"/> |  |
|                                 | 58                    | CURRY et al., Integrated Three-Dimensional Craniofacial Mapping at the Craniofacial Research Instrumentation Laboratory/University of the Pacific, <i>Seminars in Orthodontics</i> , Vol. 7, No. 4 (Dec 2001), pp. 258-265.  | <input type="checkbox"/> |  |
|                                 | 59                    | CUTTING et.al., Three-Dimensional Computer-Assisted Design of Craniofacial Surgical Procedures: Optimization and Interaction with Cephalometric and CT-Based Models, <i>Plastic and Reconstructive Surgery</i> , Vol. 77, No. 6 (June 1986), pp. 877-885.  | <input type="checkbox"/> |  |

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|                                 | 60                       | DCS Dental AG, The CAD/CAM 'DCS Titan System' for Production of Crowns/Bridges, DSC Production AG, Jan. 1992, pp. 1-7.  | <input type="checkbox"/> |                    |
|                                 | 61                       | DEFRANCO et al., Three-Dimensional Large Displacement Analysis of Orthodontic Appliances, <i>J. Biomechanics</i> , Vol. 9 (1976), pp. 793-801.  | <input type="checkbox"/> |                    |
|                                 | 62                       | DENTAL INSTITUTE UNIVERSITY OF ZURICH SWITZERLAND, Program for International Symposium on Computer Restorations: State of the Art of the CEREC-Method, May 1991, 2 pages total.   | <input type="checkbox"/> |                    |
|                                 | 63                       | DENTRAC CORPORATION, Dentrac document, pp. 4-13.  | <input type="checkbox"/> |                    |
|                                 | 64                       | DENT-X posted at <a href="http://www.dent-x.com/DentSim.htm">http://www.dent-x.com/DentSim.htm</a> 09/24/98, 6 pages total.   | <input type="checkbox"/> |                    |
|                                 | 65                       | DOYLE, Digital Dentistry, <i>Computer Graphics World</i> , Oct. 2000 pp. 50-52, 54.   | <input type="checkbox"/> |                    |
|                                 | 66                       | DURET et al, CAD-CAM in Dentistry, <i>Journal of the American Dental Association</i> , Vol. 117 (Nov. 1988), pp. 715-720.   | <input type="checkbox"/> |                    |
|                                 | 67                       | DURET et al., CAD/CAM Imaging in Dentistry, <i>Current Opinion in Dentistry</i> , Vol. 1 (1991), pp. 150-154.   | <input type="checkbox"/> |                    |
|                                 | 68                       | DURET, The Dental CAD/CAM, General Description of the Project, <i>Hennson International Product Brochure</i> , Jan. 1986., 18 pages total.  | <input type="checkbox"/> |                    |
|                                 | 69                       | DURET, Vers Une Prothese Informatisee, (English translation also attached), <i>Tonus</i> , Vol. 75, (Nov. 15, 1985), pp. 55-57.   | <input type="checkbox"/> |                    |
|                                 | 70                       | ECONOMIDES, The Microcomputer in the Orthodontic Office, <i>JCO</i> , (Nov. 1979), pp. 767-772.   | <input type="checkbox"/> |                    |
|                                 | 71                       | ELSASSER, Some Observations on the History and Uses of the Kesling Positioner, <i>Am. J. Orthod.</i> (1950) 36:368-374.   | <input type="checkbox"/> |                    |
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|                                 | 72                    | FABER et al., Computerized interactive orthodontic treatment planning, Am. J. Orthod., Vol. 73, No. 1 (Jan. 1978), pp. 3646.  | <input type="checkbox"/> |                 |
|                                 | 73                    | FELTON et al. A Computerized Analysis of the Shape and Stability of Mandibular Arch Form, Am. Journal of Orthodontics and Dentofacial Orthopedics, Vol. 92, No. 6 (Dec. 1987), pp. 478-483.   | <input type="checkbox"/> |                 |
|                                 | 74                    | FRIEDE et al., Accuracy of Cephalometric Prediction in Orthognathic Surgery, Abstract of Papers, Journal of Dental Research, Vol. 70 (1987), pp. 754-760.   | <input type="checkbox"/> |                 |
|                                 | 75                    | FÜTTERLING et al., Automated Finite Element Modeling of a Human Mandible with Dental Implants, "WSCG '98 -Conference Program, retrieved from the Internet: <<http://wscg.zcu.cz/wscg98/papers98/Strasser_98.pdf.>>, 8 pages total.                              | <input type="checkbox"/> |                 |
|                                 | 76                    | GIM-ALLDENT Deutschland, Das DUX System: Die Technik 2 pages total.   | <input type="checkbox"/> |                 |
|                                 |                       | GAO et al., 3-D Element Generation for Multi-Connected Complex Dental and Mandibular Structure," Proceedings. International Workshop on Medical Imaging and Augmented Reality, 2001,  |                          |                 |
|                                 | 77                    | GOTTLEIB et al., JCO Interviews Dr. James A. McNamara, Jr., on the Frankel Appliance: Part 2: Clinical Management, Journal of Clinical Orthodontics, Vol. 16, No. 6, (June 1982) pp. 390-407  | <input type="checkbox"/> |                 |
|                                 | 78                    | GRAYSON, New Methods for Three Dimensional Analysis of Craniofacial Deformity, Symposium: Computerized Facial Imaging in Oral and Maxiofacial Surgery, AAOMS Sept 13, 1990, 3 pages total.  | <input type="checkbox"/> |                 |
|                                 | 79                    | GUESS et al., Computer Treatment Estimates In Orthodontics and Orthognathic Surgery, JCO, (April, 1989), pp. 262-28.  | <input type="checkbox"/> |                 |
|                                 | 80                    | HEAVEN et al., Computer-based Image Analysis of Artificial Root Surface Caries, Abstracts of Papers, Journal of Dental Research, Vol. 70, April 17-21, 1991, p. 528.  | <input type="checkbox"/> |                 |
|                                 | 81                    | HOFFMANN et al, Role of Cephalometry for Planning of Jaw Orthopedics and Jaw Surgery Procedures, (Article Summary In English, article in German), Informatbnen, (March 1991), pp. 375-396.  | <input type="checkbox"/> |                 |
|                                 | 82                    | HOJJATIE et al., Three-Dimensional Finite Element Analysis of Glass-Ceramic Dental Crowns, J Biomech. (1990) Vol. 23, No. 11, pp.1157-1166.   | <input type="checkbox"/> |                 |
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|                                 | 83                    | HUCKINS, CAD-CAM Generated Mandibular Model Prototype from MRI Data, AAOMS 1999, p. 96.   | <input type="checkbox"/> |                 |
|                                 | 84                    | JCO Interviews, Craig Andreiko, DDS, MS on the Elan and Orthos Systems, JCO, (Aug. 1994), pp. 459-468.  | <input type="checkbox"/> |                 |
|                                 | 85                    | JCO Interviews, Dr. Homer W. Phillips on Computers in Orthodontic Practice, Part 2, JCO, (Dec. 1983), pp. 819-831.  | <input type="checkbox"/> |                 |
|                                 | 86                    | JERROLD, The Problem, Electronic Data Transmission and the Law, AJO-DO, (Apr. 1988), pp. 478-479.   | <input type="checkbox"/> |                 |
|                                 | 87                    | JONES et al., An Assessment of the Fit of a Parabolic Curve to Pre- and Post-Treatment Dental Arches, British Journal of Orthodontics, Vol. 16 (1989), pp. 85-93.   | <input type="checkbox"/> |                 |
|                                 | 88                    | KAMADA et.al., Case Reports On Tooth Positioners Using LTV Vinyl Silicone Rubber, J. Nihon University School of Dentistry (1984) 26(1): 11 -29.   | <input type="checkbox"/> |                 |
|                                 | 89                    | KAMADA et.al., Construction of Tooth Positioners with LTV Vinyl Silicone Rubber and Some Case Reports, J. Nihon University School of Dentistry (1982) 24(1):1-27.   | <input type="checkbox"/> |                 |
|                                 | 90                    | KANAZAWA et al., Three-Dimensional Measurements of the Occlusal Surfaces of Upper Molars in a Dutch Population, J. Dent Res., Vol. 63, No. 11 (Nov. 1984), pp. 1298-1301.   | <input type="checkbox"/> |                 |
|                                 | 91                    | KUNII et.al., Articulation Simulation for an Intelligent Dental Care System, Displays (1994) 15:181-188.  | <input type="checkbox"/> |                 |
|                                 | 92                    | LAURENDEAU et al, A Computer-Vision Technique for the Acquisition and Processing of 3-D Profiles of Dental Imprints: An Application in Orthodontics, IEEE Transactions on Medical Imaging, Vol. 10, No. 3 (Sept. 1991), pp. 453-461.                            | <input type="checkbox"/> |                 |
|                                 | 93                    | LEINFELDER et al, A New Method for Generating Ceramic Restorations: a CAD-CAM system, Journal of the American Dental Assoc, Vol. 118, No. 6 (Jun. 1989), pp. 703-707.   | <input type="checkbox"/> |                 |
|                                 | 94                    | MANETTI et al., Computer-aided Cefalometry and New Mechanics in Orthodontics (Article Summary in English, article in German), Fortschr. Kieferorthop. 44, 370-376 (Nr. 5), 1983   | <input type="checkbox"/> |                 |
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|                                 | 95                       | MCCANN, Inside the ADA, <i>Journal Of The American Dental Assoc</i> , Vol. 118 (March 1989) pp. 286-294.   | <input type="checkbox"/> |  |
|                                 | 96                       | MCNAMARA et al, <i>Orthodontic and Orthopedic Treatment in the Mixed Dentition</i> , Needham Press, January 1993. pp.347-353.  | <input type="checkbox"/> |  |
|                                 | 97                       | MCNAMARA et al, Invisible Retainers, <i>J. Clinical Orthodontics</i> , (August 1985) pp. 570-578.  | <input type="checkbox"/> |  |
|                                 | 98                       | MOERMANN et al, Computer Machined Adhesive Porcelain Inlays: Margin Adaptation after Fatigue Stress, IADR Abstract 339, <i>Journal of Dental Research</i> , Vol. 66(a) (1987), p. 763.   | <input type="checkbox"/> |  |
|                                 | 99                       | MÖRMANN et al., "Marginale Adaptation von adhäsiven Porzellaninlays in vitro," Separatdruck aus: Schweiz. Mschr. Zahnmed. 95: 1118-1129, 1985.   | <input type="checkbox"/> |  |
|                                 | 100                      | NAHOUM, "The Vacuum Formed Dental Contour Appliance," <i>The New York State Dental Journal</i> , (November 1964) Vol. 30, No. 9, pp. 385-390   | <input type="checkbox"/> |  |
|                                 | 101                      | NASH, CEREC CAD/CAM Inlays: Aesthetics and Durability in a Single Appointment, <i>Dentistry Today</i> , (October 1990), pp. 20, 22-23,54.  | <input type="checkbox"/> |  |
|                                 | 102                      | NISHIYAMA et al., A New Construction of Tooth Repositioner by LTV Vinyl Silicone Rubber, J. Nihon University School of Dentistry (1977) 19(2):93-102.  | <input type="checkbox"/> |  |
|                                 | 103                      | PAUL et al., Digital Documentation of Individual Human Jaw and Tooth Forms for Application in Orthodontics, Oral Surgery and Forensic Medicine, Industrial Electronics Society, Proceedings of the 24th Annual Conference of the IEEE, Aug 31-Sep 1998, Vol. 4, pp. 2415-2418. |                          |  |
|                                 | 104                      | PINKHAM, Foolish' Concept Propels Technology, <i>Dentist</i> , Jan./Feb. 1989, 3 pages total.  | <input type="checkbox"/> |  |
|                                 | 105                      | PINKHAM, Inventor's CAD/CAM May Transform Dentistry, <i>Dentist</i> , Sept. 1990, 3 pages total.   | <input type="checkbox"/> |  |

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|                                 | 106                      | PONITZ, Invisible Retainers, <i>Am J. Orthod.</i> , Vol 59, No. 3 (March 1971) pp. 266-272  | <input type="checkbox"/> |                    |
|                                 | 107                      | PROCERA RESEARCH PROJECTS, PROCERA Research Projects 1993 — Abstract Collection, 1993, pp. 3-28.  | <input type="checkbox"/> |                    |
|                                 | 108                      | TRU-TAIN ORTHODONTIC & DENTAL SUPPLIES, Product Brochure, Rochester, Minnesota 55902, 16 pages total.   | <input type="checkbox"/> |                    |
|                                 | 109                      | PROFFIT et al, <i>Contemporary Orthodontics</i> (Second Ed.) Chapter 15, Mosby Inc, (October 1992 ), pp 470-533   | <input type="checkbox"/> |                    |
|                                 | 110                      | RAINTREE ESSIX & ARS MATERIALS, INC., Raintree Essix, Technical Magazine Table of contents and Essix Appliances, <a href="http://www.essix.com/magazine/default.html">http:// www.essix.com/magazine/default.html</a> Aug. 13, 1997, 7 pages.                   | <input type="checkbox"/> |                    |
|                                 | 111                      | REDMOND et al. Clinical Implications of Digital Orthodontics, <i>Am. J. Orthodont. Dentofacial Orthopedics</i> , Vol. 117 No. 2 (2001), pp. 240-242.  | <input type="checkbox"/> |                    |
|                                 | 112                      | REKOW et al., CAD/CAM for Dental Restorations - Some of the Curious Challenges, <i>IEEE Transactions on Biomedical Engineering</i> , (April 1991) Vol. 38, No. 4, pp. 344-345.  | <input type="checkbox"/> |                    |
|                                 | 113                      | REKOW et al., Comparison of Three Data Acquisition Techniques for 3-D Tooth Surface Mapping, <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , (1991) Vol. 13, No. 1, pp. 344-345.                               | <input type="checkbox"/> |                    |
|                                 | 114                      | REKOW, A Review of the Developments in Dental CAD/CAM Systems, <i>Curr Opin Dent.</i> (1992 Jun) Vol. 2, pp. 25-33.   | <input type="checkbox"/> |                    |
|                                 | 115                      | REKOW, CAD/CAM in Dentistry: A Historical Perspective and View of the Future, <i>J Can Dent Assoc</i> , Vol. 58 No. 4, (April 1992), pp. 283, 287-288.  | <input type="checkbox"/> |                    |
|                                 | 116                      | REKOW, Computer-Aided Design and Manufacturing in Dentistry: A Review of the State of the Art, <i>The Journal of Prosthetic Dentistry</i> , Vol. 58, No. 4 (Oct. 1987), pp. 512-516.  | <input type="checkbox"/> |                    |
|                                 | 117                      | REKOW, Dental CAD-CAM Systems: What is the State of the Art? <i>Journal of the American Dental Assoc</i> , Vol. 122 (1991), pp. 43-48.  | <input type="checkbox"/> |                    |
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|                                 | 118                      | REKOW, Feasibility of an Automated System for Production of Dental Restorations, PhD Thesis, Univ. of Minnesota, Nov. 1988, 244 pages total,  | <input type="checkbox"/> |                    |
|                                 | 119                      | RICHMOND et.al., The Development of the PAR Index (Peer Assessment Rating): Reliability and Validity, <i>European Journal of Orthodontics</i> (1992) 14:125-139.  | <input type="checkbox"/> |                    |
|                                 | 120                      | RICHMOND et al., Research Reports, The, Development of a 3D Cast Analysis System, <i>British Journal of Orthodontics</i> , pp. 53-54.   | <input type="checkbox"/> |                    |
|                                 | 121                      | RICHMOND, Recording The Dental Cast In Three Dimensions, <i>Am. J. Orthod. Dentofac. Orthop.</i> , Vol. 92, No. 3, (Sept. 1987), pp.199-206.  | <input type="checkbox"/> |                    |
|                                 | 122                      | RUDGE, Dental arch analysis: arch form, A review of the literature, <i>European Journal of Orthodontics</i> , Vol. 3, No. 4 (1981), pp.279-284.   | <input type="checkbox"/> |                    |
|                                 | 123                      | SAKUDA et al., Integrated Information-Processing System In Clinical Orthodontics: An Approach with Use of a Computer Network System, <i>Am. J. Orthod. Dentofac. Orthop.</i> Vol. 101 No. 3 (March 1992), pd. 210-220.  | <input type="checkbox"/> |                    |
|                                 | 124                      | SCHELLHAS et al., Three-Dimensional Computed Tomography in Maxillofacial Surgical Planning, <i>Arch Otolamgol Head Neck Surg.</i> Vol. 114 (April 1988), pp. 438-442.   | <input type="checkbox"/> |                    |
|                                 | 125                      | SCHROEDER et al., Eds. The Visual Toolkit, Prentice Hall PTR, New Jersey (1998) Chapters 6, 8 & 9, (pages 153-210, 309-354, and 355-428, respectively).   | <input type="checkbox"/> |                    |
|                                 | 126                      | SIEMENS, CEREC - Computer-Reconstruction, High Tech in der Zahnmedizin, 14 page total.  | <input type="checkbox"/> |                    |
|                                 | 127                      | SINCLAIR, "The Readers' Corner," <i>Journal of Clinical Orthodontics</i> , Vol 26, No. 6, (June 1992) pp. 369-372   | <input type="checkbox"/> |                    |
|                                 | 128                      | SIRONA DENTAL SYSTEMS GmbH, <i>CEREC 3D, Manuel utilisateur</i> , Version 2.0X (in French), 2003, 114 pages total.  | <input type="checkbox"/> |                    |
|                                 | 129                      | STOLL et al., Computer-aided Technologies in Dentistry (Article Summary in English, article in German), <i>Dtsch Zahna'rztl Z</i> 45, 314-322, 1990.  | <input type="checkbox"/> |                    |
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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|  |    |    |    | Application Number       | 10/705,391           |
|  |    |    |    | Filing Date              | November 10, 2003    |
|  |    |    |    | First Named Inventor     | HUGHES, JOY VANNELIA |
|  |    |    |    | Art Unit                 | 3732                 |
|  |    |    |    | Examiner Name            | MANAHAN, TODD        |
| Sheet  | 12 | of | 13 | Attorney Docket Number   | 018563-005910US      |

| NON PATENT LITERATURE DOCUMENTS |                          |   |                          |
|---------------------------------|--------------------------|---|--------------------------|
| Examiner<br>Initials *          | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup>           |
|                                 | 130                      | U.S. Department of Commerce, National Technical Information Service, Automated Crown Replication Using Solid Photography SM, Solid Photography Inc. Melville NY, October 1977, 20 pages total.  | <input type="checkbox"/> |
|                                 | 131                      | U.S. Department of Commerce, National Technical Information Service, Holodontography: An Introduction to Dental Laser Holography, School of Aerospace Medicine Brooks AFB Tex, March 1973, 37 pages total.  | <input type="checkbox"/> |
|                                 | 132                      | U.S. Provisional Patent Application No. 60/050342, filed on June 20, 1997, 41 pages total.  | <input type="checkbox"/> |
|                                 | 133                      | VAN DER LINDEN et al., Three-Dimensional Analysis of Dental Casts by Means of the Optocom, <i>J Dent Res</i> , July-August 1972, p. 1100.   | <input type="checkbox"/> |
|                                 | 134                      | VAN DER LINDEN, A New Method to Determine Tooth Positions and Dental Arch Dimensions, <i>J Dent Res</i> , July-August 1972, Vol. 51, No. 4, p. 1104.  | <input type="checkbox"/> |
|                                 | 135                      | VAN DER ZEL, Ceramic-fused-to-metal Restorations with a New CAD/CAM System, <i>Quintessence International</i> , Vol. 24, No. 11 (1993), pp. 769-778.  | <input type="checkbox"/> |
|                                 | 136                      | VARADY et al., Reverse Engineering Of Geometric Models—An Introduction, <i>Computer-Aided Design</i> , 29 (4):255-268, 1997.  | <input type="checkbox"/> |
|                                 | 137                      | VERSTREKEN et al., An Image-Guided Planning System for Endosseous Oral Implants, <i>IEEE Transactions on Medical Imaging</i> , Vol. 17, No. 5, (Oct 1998), pp. 842-852.   | <input type="checkbox"/> |
|                                 | 138                      | WARUNEK et al., "Physical and Mechanical Properties of Elastomers in Orthodontic Positioners, <i>Am J. Orthod. Dentofac. Orthop</i> , Vol. 95, No. 5, (May 1989) pp. 399-400.   | <input type="checkbox"/> |
|                                 | 139                      | WILLIAMS, Dentistry and CAD/CAM: Another French Revolution, <i>Journal of Dental Practice Admin.</i> , Jan./March 1987, pp. 2-5.  | <input type="checkbox"/> |
|                                 | 140                      | WILLIAMS, The Switzerland and Minnesota Developments in CAD/CAM, <i>Journal of Dental Practice Admin.</i> , pp. 50-55, April/June 1987.   | <input type="checkbox"/> |

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|                                 | 141                      | WISHAN, New Advances in Personal Computer Applications for Cephalometric Analysis, Growth Prediction, Surgical Treatment Planning and Imaging Processing, Symposium: Computerized Facial Imaging in Oral and Maxillofacial Surgery Presented on September 13, 1999              | <input type="checkbox"/> |  |
|                                 | 142                      | XIA et al., Three-Dimensional Virtual-Reality Surgical Planning and Soft-Tissue Predication for Orthonathic Surgery, IEEE Transaction on Information Technology in Biomedicine, Vol. 5, No. 2, (Jun 2001) pp. 97-107.   | <input type="checkbox"/> |  |
|                                 | 143                      | YAMAMOTO et al., Optical Measurement of Dental Cast Profile and Application to Analysis of Three-Dimensional Tooth Movement in Orthodontics, <i>Frontiers in Med. and Biol. Eng'g</i> , Vol. 1, No. 2 (1988), pp. 119-130.  | <input type="checkbox"/> |  |
|                                 | 144                      | YAMAMOTO et al., Three-Dimensional Measurement of Dental Cast Profiles and Its Applications to Orthodontics, <i>Annual Int'l Conf. of IEEE Engineering in Medicine and Biology Society</i> , Vol. 12, No. 5 (1990), pp. 2051-2053   | <input type="checkbox"/> |  |
|                                 | 145                      | YAMANY et al., A System for Human Jaw Modeling Using Intra-Oral Images, A System for Human Jaw Modeling Using Intra-Oral Images. In IEEE-EMBS, Volume 2, (Oct 29 -Nov 1998) pp. 563--566, 1998.   | <input type="checkbox"/> |  |
|                                 | 146                      | YOSHII, Research on a New Orthodontic Appliance: The Dynamic Positioner (D.P.)-1. The D.P. concept and Implementation of Transparent Silicone Resin (Orthocon), <i>Nippon Dental Review</i> , Vol. 452,6/80, pp. 61-74.   | <input type="checkbox"/> |  |
|                                 | 147                      | YOSHII, Research on A New Orthodontic Appliance: The Dynamic Positioner (D.P.)-II. Th D.P. Manufacturing Procedure and Clinical Applications, <i>Nippon Dental Review</i> , Vol. 454, Aug. 1980, pp. 107-130.   | <input type="checkbox"/> |  |
|                                 | 148                      | YOSHII, Research on a New Orthodontic Appliance: The Dynamic Positioner (D.P.)-III. The General Concept of the D.P. Method and its Therapeutic Effect, Part 1, Dental and Functional Reversed Occlusion Case Reports, <i>Nippon Dental Review</i> , Vol. 457,11/80, pp.146-164. | <input type="checkbox"/> |  |
|                                 | 149                      | YOSHII, Research on a New Orthodontic Appliance: The Dynamic Positioner (D.P.)-III- The General Concept of the D.P. Method and its Therapeutic Effect, Part 2. Skeletal reversed Occlusion Case Reports, <i>Nippon Dental Review</i> , Vol.458,12/80, pp. 112-129.              | <input type="checkbox"/> |  |

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